(54) Title: APPARATUS AND METHOD FOR HIGH THROUGHPUT SPUTTERING

(57) Abstract

An apparatus provides a single or multi-layer coating to the surface of a plurality of substrates. The apparatus includes a plurality of buffer and sputtering chambers (12, 18, 20, 22A-E, 24A-C, 26 and 28-30), and an input end and an output end. The substrates are transported through said chambers (12, 18, 20, 22A-E, 24A-C, 26 and 28-30) at varying rates of speed. The apparatus may further include means for transporting a plurality of substrates through sputtering chambers (20, 26, 28) at variable velocities; means for reducing the ambient pressure within the sputtering chambers (20, 26, 28) to a vacuum level to enable sputtering operation; means for heating the substrates to a temperature conducive to sputtering coatings thereon providing a substantially uniform temperature profile over the surface of the substrates; and control means for providing control signals to and for receiving feedback input from, said sputtering chambers (20, 26, 28), means for transporting, means for reducing, and means for heating, the control means being programmable for allowing control over the means for sputtering, transporting, reducing and heating.